

Energy Tidbits

June 30, 2019

Produced by: Dan Tsubouchi

No Suspense To OPEC+ Meetings As Putin/MBS Agree To Extend Cuts For 6, Possibly 9 Months

Welcome to new Energy Tidbits memo readers. We are continuing to add new readers to our Energy Tidbits memo and energy blogs. The focus and concept for the memo was set in 1999 with input from PMs, who were looking for research (both positive and negative items) that helped them shape their investment thesis to the energy space, and not focusing on day to day trading. Our priority was and still is to not just report on events, but interpret and point out implications therefrom. The best example is our review of investor days, conferences and earnings calls focusing on sector developments that are relevant to the sector and not just a specific company results/guidance. Our target is to write on 48 to 50 weekends per year and to send out by noon mountain time.

This week's memo highlights:

1. Putin/MBS agree to extend OPEC+ deal for 6, possibly up to 9 months. ([Click Here](#))
2. Nord Stream 2 makes Denmark approvals easier by only keeping route options thru Danish exclusive economic zone waters. ([Click Here](#))
3. Trans Mountain President expects construction start in early to mid Sept. ([Click Here](#))
4. Excellent Permian/Cushing/Gulf Coast oil insights from Wood Mackenzie webinar. ([Click Here](#))
5. Trump didn't even acknowledge Guaido when asked if he still believed Guaido should lead the country. ([Click Here](#))
6. Trump's long answer at G20 press conference seems to point to no sanctions on Turkey for S400 purchase. ([Click Here](#))
7. Please follow us on Twitter at [LINK](#) for breaking news that ultimately ends up in the weekly Energy Tidbits memo that doesn't get posted until Sunday noon MT.
8. For new readers to our Energy Tidbits and our blogs, you will need to sign up at our blog sign up to receive future Energy Tidbits memos. The sign up is available at [LINK](#).

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Natural Gas – Natural gas injection of 98 bcf, storage now at 236 bcf YoY surplus

This week, the EIA reported a 98 bcf natural gas injection, lower than expectations of a 102 bcf injection to bring storage to 2.301 tcf as of June 21. This is a widening of the YoY surplus to 236 bcf vs 209 bcf YoY surplus last week, but storage is down 171 bcf vs against the 5 yr average. The big weekly gas injections are holding HH prices well below \$2.50, and we should see storage continue to narrow against the 5 yr average. Below is the EIA's storage table from its Weekly Natural Gas Storage Report. [\[LINK\]](#)

**YoY storage at
236 bcf YoY
surplus**

Figure 1: US Natural Gas Storage

Region	Stocks billion cubic feet (Bcf)				Historical Comparisons			
	06/21/19	06/14/19	net change	implied flow	Year ago (06/21/18)		5-year average (2014-18)	
	Bcf				Bcf	% change	Bcf	% change
East	499	472	27	27	427	16.9	510	-2.2
Midwest	538	503	35	35	422	27.5	555	-3.1
Mountain	127	118	9	9	132	-3.8	156	-18.6
Pacific	245	234	11	11	250	-2.0	282	-13.1
South Central	893	875	18	18	834	7.1	969	-7.8
Salt	263	264	-1	-1	253	4.0	287	-8.4
Nonsalt	630	612	18	18	581	8.4	682	-7.6
Total	2,301	2,203	98	98	2,065	11.4	2,472	-6.9

Source: EIA

Natural Gas – US gas production in Apr is up 9.8 bcf/d YoY

The EIA released its Natural Gas Monthly on Fri, which includes its estimates for “actuals” for Apr gas production. The big negative to natural gas has been higher YoY natural gas supply, and this continues to be the case in Q2. The EIA estimates US natural gas production in Apr at 90.3 bcf/d, up 0.9 bcf/d MoM vs 89.4 bcf/d for Mar 2019, which is +9.8 bcf/d YoY vs Apr 2018. Higher YoY natural gas production, along with record high natural gas injections are keeping HH in the \$2.25-\$2.50 range. The HH strips have been driven lower and are down to approx. \$2.40 for 2019, and \$2.55 for 2020. Our Supplementary Documents package includes excerpts from the EIA Natural Gas Monthly. [\[LINK\]](#)

**US Apr gas
production up 9.8
bcf/d YoY**

Figure 2: US Dry Natural Gas Production

bcf/d	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Jan	56.0	60.0	65.9	65.3	67.8	72.6	73.8	71.0	77.9	88.7
Feb	57.3	58.8	65.2	65.9	67.5	73.7	74.7	71.6	79.4	89.3
March	57.3	61.5	65.1	65.4	68.2	74.1	74.0	73.3	80.2	89.4
Apr	57.6	62.3	65.4	66.0	68.6	75.0	73.8	73.4	80.4	90.3
May	58.0	62.4	65.6	66.3	69.5	74.2	73.5	73.3	81.3	
June	57.2	62.1	65.4	66.3	69.8	74.3	72.5	73.8	81.8	
July	58.3	62.5	65.8	67.0	70.6	74.3	73.1	74.7	83.4	
Aug	58.9	63.2	65.4	67.0	71.6	74.3	72.3	74.7	85.2	
Sept	59.1	63.1	66.2	67.2	71.7	75.0	71.9	75.8	86.4	
Oct	60.1	65.1	66.5	67.6	72.2	74.1	71.4	76.9	87.2	
Nov	60.1	65.9	66.6	68.6	73.1	74.1	72.1	79.0	88.6	
Dec	61.0	65.6	65.8	66.6	74.7	74.0	71.2	79.5	88.9	
Average	58.4	62.7	65.7	66.7	70.4	74.1	72.8	74.8	83.4	

Source: EIA

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Natural Gas – US LNG exports +1.3 bcf/d YoY,

The EIA also reported “actuals” for US LNG exports, which were 4.2 bcf/d in Apr, +1.2 bcf/d YoY. US LNG exports should continue to increase over the balance of 2019, but at a slightly lower pace than previously expected. The EIA’s June STEO revised down forecast average Q3/19 LNG exports by 0.37 bcf/d to 4.82 bcf/d, likely due to weaker Asian LNG demand growth thru the summer, along with very high European gas storage levels (mentioned below). Below is our table of EIA’s monthly LNG exports.

**US April LNG
exports +1.3 bcf/d
YoY**

Figure 3: US LNG Exports (bcf/d)

(bcf/d)	2016	2017	2018	2019
Jan	0.0	1.7	2.3	4.1
Feb	0.1	1.9	2.6	3.7
March	0.3	1.4	3.0	4.2
Apr	0.3	1.7	2.9	4.2
May	0.3	2.0	3.1	
June	0.5	1.7	2.5	
July	0.5	1.7	3.2	
Aug	0.9	1.5	3.0	
Sept	0.6	1.8	2.7	
Oct	0.1	2.6	2.9	
Nov	1.1	2.7	3.6	
Dec	1.3	2.7	4.0	
Full Year	0.5	1.9	3.0	
Full Year bcf	186	708	1,084	

Source: EIA

Natural Gas - Mexico pipeline exports +0.2 bcf/d YoY

The EIA estimates gas pipeline exports to Mexico were 4.6 bcf/d in Apr, +0.2 bcf/d YoY but down 0.2 bcf/d MoM from March. There are no surprises in the data, however the data seems to confirm that the EIA did in fact make a big model error in the Apr Natural Gas Monthly that we highlighted in our June 9, 2019 Energy Tidbits memo. The new data is in line with last month’s revised numbers, so it looks like the EIA has corrected the error. Below is our table of the EIA’s monthly gas exports to Mexico.

**US April gas
exports to Mexico
+1.2 bcf/d YoY**

Figure 4: US LNG Exports (bcf/d)

bcf/d	2014	2015	2016	2017	2018	2019
Jan	1.7	2.2	3.2	3.9	4.4	4.9
Feb	1.8	2.3	3.4	4.1	4.5	4.8
March	1.9	2.4	3.3	4.2	4.3	4.8
Apr	1.9	2.6	3.5	3.9	4.4	4.6
May	2.0	2.8	3.7	4.2	4.4	
June	2.2	3.0	3.9	4.5	4.6	
July	2.2	3.3	4.0	4.4	4.9	
Aug	2.1	3.3	4.3	4.4	5.0	
Sept	2.2	3.3	4.1	4.2	5.0	
Oct	1.9	3.2	4.2	4.3	4.9	
Nov	1.9	3.0	4.0	4.5	4.7	
Dec	2.1	3.2	3.7	4.4	4.5	
Full Year	2.0	2.9	3.8	4.2	4.6	
Full Year bcf	729	1,054	1,377	1543	1688	
YoY Increase bcf		325	323	166	145	

Source: EIA

Natural Gas – Mexico blocks start up of Texas-Tuxpan gas pipeline

This week, Mexico shocked the natural gas sector by the news that it had halted the new 2.6 bcf/d Sur de Texas-Tuxpan natural gas pipeline. The JV project owned by TC Energy and IEnova was just completed in the last month and was about to start operations, but Mexico's Federal Electricity Commission has halted the project. Bloomberg story "*Mexico Blocks Startup of Sur de Texas-Tuxpan Gas Pipeline*" said *Mexico's Federal Electricity Commission has halted the project, filing an arbitration request for the companies to refund capacity fees they paid while the project was delayed because of force majeure events, according to a joint statement from IEnova and TC Energy*". No question that this is a negative to HH gas prices. However, we don't believe the CFE is trying to shut down the just constructed pipeline for good. Rather we believe this as a negotiating tactic and the question is what will they get and how much will it cost. The implications here seem to be two-fold. (i) Do these actions send the signal that Mexico does not want to uphold gas pipeline contracts? On Wed, Canada's diplomat to Mexico, Pierre Alarie Tweeted (using google translate) [LINK](#) "*I am deeply concerned about the recent actions of the @CFE_mx and the signal they send that, despite the declarations of @lopezobrador_, Mexico does not want to respect the gas pipeline contracts*". This move from Mexico's Federal Electricity Commission ultimately will add uncertainty from the Mexico side, which could add risk to execution of other Mexico projects in oil and gas and other sectors. (ii) Negative to HH prices. The pipeline is set to provide an outlet for Texas natural gas, and delays to start up will ultimately add more downward pressure on already depressed US natural gas prices. The impact will depend on the length of the delay. Below is the IEnova Mexico map showing the Sur de Texas pipeline.

Mexico blocks Texas-Tuxpan gas pipeline

Figure 5: TC Energy/IEnova Pipeline Map



Source: Bloomberg

Natural Gas – Low HH gas prices this summer to help, but not fix high US storage

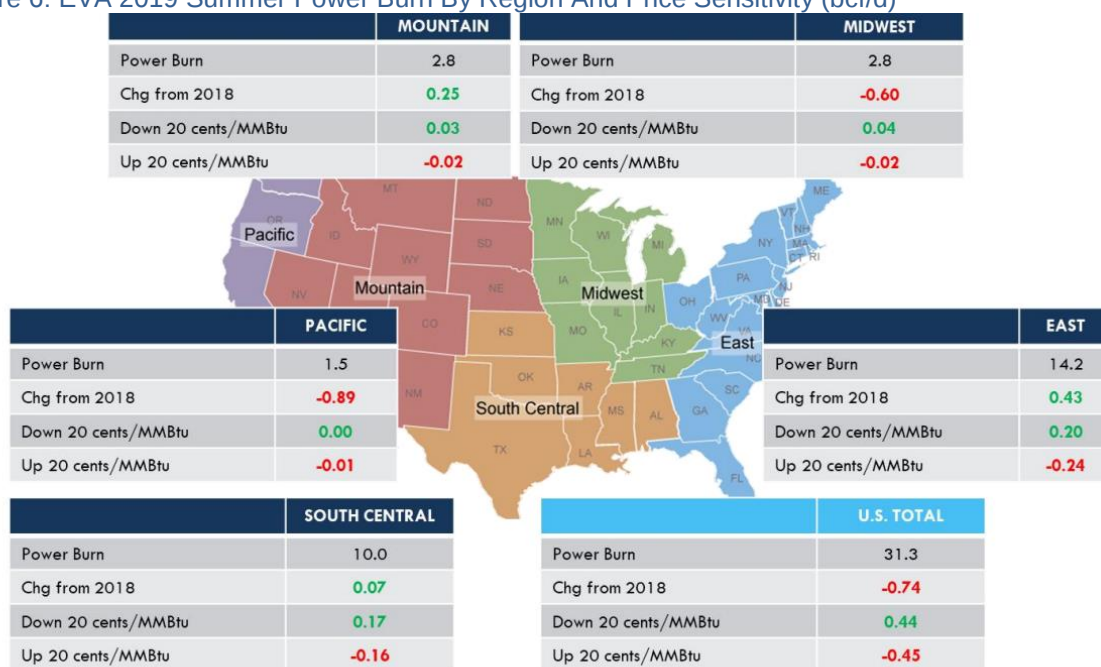
The annual, before summer rash of analyst revisions (many for low US and Cdn natural gas prices) reminded us of the one benefit from low natural gas prices – we should see maximum

Low HH prices to help storage levels

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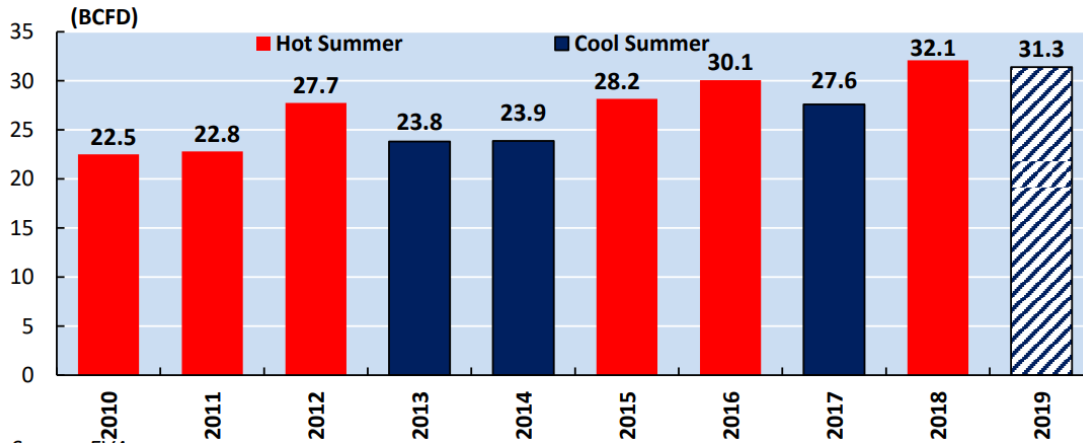
coal to gas switching this summer. On Wed, we tweeted [\[LINK\]](#) “Low HH #naturalgas prices to drive more coal/gas switching summer electric gas demand. NGSA/EVA sensitivity adds 0.88 bcf/d demand for \$0.20/MMBtu price drop. If J/J/A/S is ~\$2.35, would add ~1.32 bcf/d or added burn ~160 bcf. Helps but not a fix to HH.” We used the excellent background report prepared by Energy Ventures Analysis “Natural Gas Market Summer Outlook 2019” [\[LINK\]](#) for the NGSA’s summer outlook (see our June 9, 2019 Energy Tidbits) for our sensitivity. EVA estimates summer electric gas demand at 31.3 bcf/d. vs last yr of 32.1 bcf/d. But EVA also provided a sensitivity to price, which is, in total US, 0.88 bcf/d more burn for a \$0.20/MMBtu price drop. I believe they used a \$2.65 HH price. HH is currently ~\$2.30. But if we assume lower prices for J/J/A/S of approx. \$2.35, then that would be an additional burn of 161 bcf. EVA forecast Nov 1/19 storage +498 bcf YoY, so this would reduce that to +337 bcf YoY. A help but not going to change the concern of weak HH gas prices going into the winter as long as US natural gas production continues to be strong. We continue to recommend adding the EVA analysis to reference libraries. Our Supplemental Documents package includes excerpts from the EVA report.

Figure 6: EVA 2019 Summer Power Burn By Region And Price Sensitivity (bcf/d)



*Numbers are in BCFD
Source: EVA

Figure 7: EVA Forecast Summer Electric Gas Demand (bcf/d)



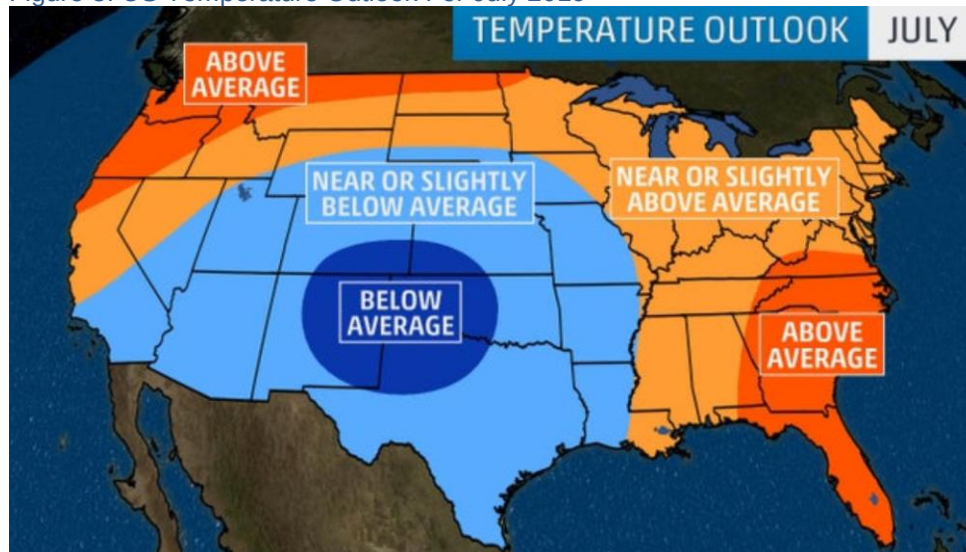
Source: EVA

Natural Gas – July temps a slight positive for HH, but July 2018 was 11th warmest ever

On Friday, the Weather Channel released its US temperature outlook for July. [\[LINK\]](#) There were two key takeaways from the new forecast. (i) Texas is below average, which should mean less risk for power outages impacting oil and natural gas operations. (ii) most of the key Midwest/east US is near or slightly above or above average – so basically in line with the pre summer expectations of slightly above normal temps. Should be a slight positive to natural gas, except the YoY comp is to a hotter July 2018. NOAA's recap [\[LINK\]](#) was "The July 2018 contiguous U.S. temperature was 75.5°F, 1.9°F above the 20th century average. This tied with 1998 as the 11th warmest July on record."

July temps likely a small positive

Figure 8: US Temperature Outlook For July 2019



Source: Weather Channel

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Natural Gas – Mexico's natural gas production still below 5 bcf/d in May

One of the key Mexican energy themes continues to be their inability to grow domestic natural gas production, which means increasing natural gas imports from the US. On Mon, Pemex reported its May natural gas production and Mexico natural gas production in May was 4.841 bcf/d, which has been virtually unchanged for the past 20 months. May was flat YoY vs May 2018. Below is our ongoing table from the Pemex monthly data. [\[LINK\]](#)

Mexico natural gas production <5 bcf/d

Figure 9: Mexico Natural Gas Production (bcf/d)

Natural Gas Production bcf/d	2015	2016	16/15	2017	17/16	2018	18/17	2019	19/18
Jan	6.584	6.162	-6.4%	5.326	-13.6%	4.910	-7.8%	4.648	-5.3%
Feb	6.676	6.122	-8.3%	5.299	-13.4%	4.853	-8.4%	4.869	0.3%
Mar	6.558	6.030	-8.1%	5.383	-10.7%	4.646	-13.7%	4.857	4.5%
Apr	6.257	5.921	-5.4%	5.334	-9.9%	4.869	-8.7%	4.816	-1.1%
May	6.202	5.841	-5.8%	5.299	-9.3%	4.827	-8.9%	4.841	0.3%
June	6.390	5.881	-8.0%	5.253	-10.7%	4.840	-7.9%		
July	6.374	5.785	-9.2%	5.216	-9.8%	4.856	-6.9%		
Aug	6.366	5.686	-10.7%	5.035	-11.4%	4.898	-2.7%		
Sept	6.477	5.619	-13.2%	4.302	-23.4%	4.913	14.2%		
Oct	6.397	5.583	-12.7%	4.759	-14.8%	4.895	2.9%		
Nov	6.316	5.515	-12.7%	4.803	-12.9%	4.776	-0.6%		
Dec	6.236	5.380	-13.7%	4.811	-10.6%	4.881	1.5%		

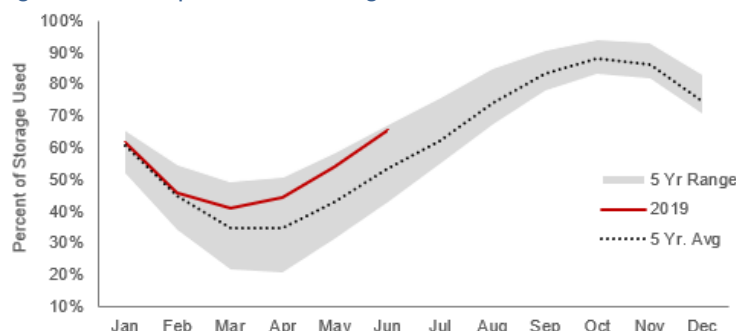
Source: Pemex

Natural Gas – Record Europe heat wave/high electricity price but low nat gas prices

Europe natural gas prices were lower this week, despite a massive heat wave and a drop in wind power generation. Generally, a heat wave coupled with lower renewables generation should cause a spike in natural gas prices, but the European natural gas market is oversupplied, as evidenced by gas storage at very high levels. European gas storage is 70.9% utilized as of June 26, 2019. Utilization didn't hit that level until Aug 23 in 2018 (ie. 2 months later) and utilization was just 47.3% a year ago (June 26, 2019). The higher utilization is primarily due to the mild Asian winter/shoulder season sending excess Asian redirected cargos to NW Europe. We have been commenting on this because high European gas inventories impacts more than just Europe gas prices, as the impact should also backup to reduced or at least slower growth in US LNG exports this summer, adding pressure on US natural gas prices. Another point to consider, is the filling of European storage could limit the role Europe can play as a dumping ground for surplus Asian LNG cargos in the fall. Below is a graph of European gas storage utilization in 2019 compared to the five year average.

High Europe gas storage levels

Figure 10: European Gas Storage Utilization



Source: Bloomberg

Source: Bloomberg

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Natural Gas – Nord Stream 2 makes it easier to get Danish approvals

Interesting development in Nord Stream 2 gas pipeline trying to get Danish Energy Agency approval. Reminder we continue to warn that Gazprom's new gas pipelines will be a major negative to global LNG prices in 2020 and 2021. Gazprom's 5.3 bcf/d Nord Stream 2 gas export pipeline to Germany will be a major negative to global LNG prices once it goes in service. The project was expected in service end of 2019, but has been held up by additional requirements from the Danish Energy Agency in Apr. Looks like a smart move by Nord Stream 2 to get this over the hump in Denmark. They apparently withdrew their original route for Danish Energy Agency approval and left them with the two alternative routes. The significance is that the original route was thru Danish territorial waters and the two alternative routes are not thru Danish territorial waters, but thru the exclusive economic zone. Kivipost (Ukraine English language news) notes "It is easier to get a permit to go through the exclusive economic zone. These routes do not require vetting by the Ministry of Foreign Affairs and can be approved after meeting the Danish Energy Agency's requirements, including the environmental review." Nord Stream 2 is 5.3 bcf/d, which was originally planned to be on stream by year end 2019. They still think they can get there with some reasonably timely Danish approvals. This change sounds significant. Regardless if this comes on at year end or sometime in H1/2020, it is a major negative to 2020 LNG gas prices. Our Supplemental Documents package includes the Kivipost story [\[LINK\]](#) and our March 30, 2019 blog "LNG Price Pressures 2020/2021 With Gazprom Adding ~8.9 Bcf/D Export Gas Pipeline Capacity Into Europe And China" [\[LINK\]](#).

Less Danish approvals for Nord Stream 2

Figure 11: Nord Stream 2 Route, ~5.6 bcf/d Capacity



Source: Nord Stream 2

Oil – US oil rigs up 4 to 793 oil rigs

On Friday, Baker Hughes reported its weekly rig data which was basically neutral for oil prices. US oil rigs were up 4 to 793 oil rigs as of June 28. Increases were in Cana Woodford +4, Others +3, and Permian +2. Decreases were in DJ Niobrara -2, Eagle Ford -1, Mississippian -1, and Williston -1. Active US oil rigs are down 84 YTD, as producers have cut spending in 2019. Major services companies are expecting drilling to bottom in Q2/19 and we expect new Permian egress to boost Permian oil production and drilling in H2/19, which means we should start to see a modest increase in oil rigs moving into H2 of 2019. Below is our graph of the Baker Hughes weekly US oil rig data.

US oil rigs were +4 this week

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Figure 12: Baker Hughes Weekly Rig Count – Total US Oil Rigs



Source: Baker Hughes, SAF

Oil – Total Cdn rigs up 5 to 124 total rigs

Baker Hughes reported Cdn rigs were up 5 to 124 total rigs as of June 28. Cdn oil rigs were up 4 to 84 oil rigs (down 33 from 117 a year ago). Cdn gas rigs were up 1 to 40 Cdn gas rigs, vs last spring's bottom of 43 gas rigs on June 1. The ramp up to the end of June off the post the break up trough has been slow, only +63 rigs, which reflects continued weak Cdn natural gas price and share prices. Below is our graph of the Baker Hughes weekly Cdn oil rig data.

**Total Cdn rigs +5
this week**

Figure 13: Baker Hughes Weekly Rig Count, Canadian Oil Rigs



Source: Baker Hughes, SAF

Oil – EIA says US oil production down 100,000 b/d to 12.1 mmb/d

EIA reported US oil production was down another 100,000 b/d to 12.1 mmb/d for the June 21 week, and is now 300,000 b/d below the record production of 12.4 mmb/d. Lower 48 was down 100,000 b/d to 11.5 mmb/d. The average of weekly estimates so far in Q2 is directly in line with forecast Q2 production from the new STEO, which provides a good starting point as we move into H2. New Permian egress will push US oil production higher in H2, with the EIA expecting avg. Q4/19 oil production of 12.83 mmb/d, which is +630,000 b/d from avg. Q2 levels. Below we pasted an excerpt from the EIA weekly oil production data. [\[LINK\]](#)

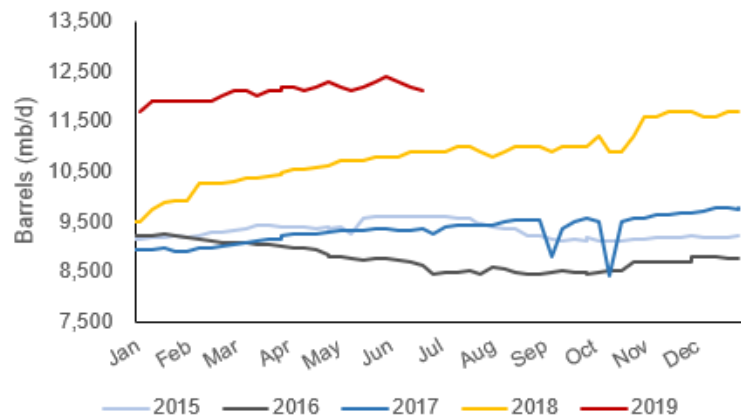
**US production
at 12.1 mmb/d**

Figure 14: Weekly Oil Production

Year-Month	Week 1		Week 2		Week 3		Week 4		Week 5	
	End Date	Value	End Date	Value	End Date	Value	End Date	Value	End Date	Value
2017-Jan	01/06	8,946	01/13	8,944	01/20	8,961	01/27	8,915		
2017-Feb	02/03	8,978	02/10	8,977	02/17	9,001	02/24	9,032		
2017-Mar	03/03	9,088	03/10	9,109	03/17	9,129	03/24	9,147	03/31	9,199
2017-Apr	04/07	9,235	04/14	9,252	04/21	9,265	04/28	9,293		
2017-May	05/05	9,314	05/12	9,305	05/19	9,320	05/26	9,342		
2017-Jun	06/02	9,318	06/09	9,330	06/16	9,350	06/23	9,250	06/30	9,338
2017-Jul	07/07	9,397	07/14	9,429	07/21	9,410	07/28	9,430		
2017-Aug	08/04	9,423	08/11	9,502	08/18	9,528	08/25	9,530		
2017-Sep	09/01	8,781	09/08	9,353	09/15	9,510	09/22	9,547	09/29	9,561
2017-Oct	10/06	9,480	10/13	8,406	10/20	9,507	10/27	9,553		
2017-Nov	11/03	9,620	11/10	9,645	11/17	9,658	11/24	9,682		
2017-Dec	12/01	9,707	12/08	9,780	12/15	9,789	12/22	9,754	12/29	9,782
2018-Jan	01/05	9,492	01/12	9,750	01/19	9,878	01/26	9,919		
2018-Feb	02/02	10,251	02/09	10,271	02/16	10,270	02/23	10,283		
2018-Mar	03/02	10,369	03/09	10,381	03/16	10,407	03/23	10,433	03/30	10,460
2018-Apr	04/06	10,525	04/13	10,540	04/20	10,586	04/27	10,619		
2018-May	05/04	10,703	05/11	10,723	05/18	10,725	05/25	10,769		
2018-Jun	06/01	10,800	06/08	10,900	06/15	10,900	06/22	10,900	06/29	10,900
2018-Jul	07/06	10,900	07/13	11,000	07/20	11,000	07/27	10,900		
2018-Aug	08/03	10,800	08/10	10,900	08/17	11,000	08/24	11,000	08/31	11,000
2018-Sep	09/07	10,900	09/14	11,000	09/21	11,100	09/28	11,100		
2018-Oct	10/05	11,200	10/12	10,900	10/19	10,900	10/26	11,200		
2018-Nov	11/02	11,600	11/09	11,700	11/16	11,700	11/23	11,700	11/30	11,700
2018-Dec	12/07	11,600	12/14	11,600	12/21	11,700	12/28	11,700		
2019-Jan	01/04	11,700	01/11	11,900	01/18	11,900	01/25	11,900		
2019-Feb	02/01	11,900	02/08	11,900	02/15	12,000	02/22	12,100		
2019-Mar	03/01	12,100	03/08	12,000	03/15	12,100	03/22	12,100	03/29	12,200
2019-Apr	04/05	12,200	04/12	12,100	04/19	12,200	04/26	12,300		
2019-May	05/03	12,200	05/10	12,100	05/17	12,200	05/24	12,300	05/31	12,400
2019-Jun	06/07	12,300	06/14	12,200	06/21	12,100				

Source: EIA

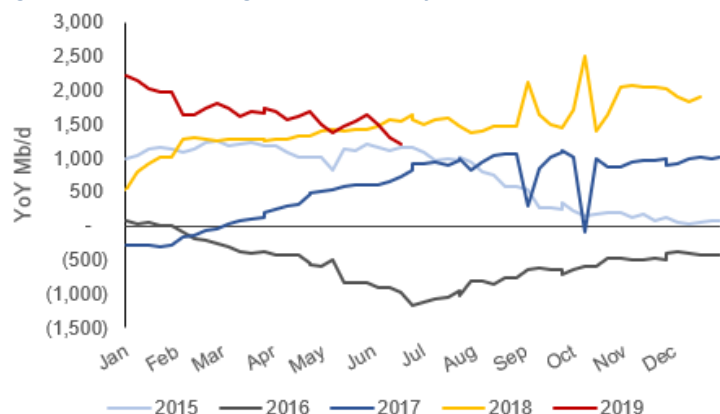
Figure 15: US Weekly Oil Production



Source: EIA, SAF

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Figure 16: YoY Change in US Weekly Oil Production



Source: EIA, SAF

Oil – Form 914 actuals: Apr actuals +246,000 b/d MoM, in line with weekly estimates

While the EIA's weekly oil production estimates are a reasonable gauge of current production, the EIA's Form 914 data provides a better measure of actual production, albeit with a two month lag. On Fri, the EIA released its Form 914 oil production data for Apr [\[LINK\]](#) and it looks like the actuals have finally caught up to the weekly estimates for oil production. The Form 914 data is considered the EIA's "actuals" for oil production as opposed to the weekly estimates for oil production above and it showed a big MoM increase in US oil production. The new Form 914 for Apr oil production showed strong YoY growth, being up 1.687 mmb/d YoY to 12.162 mmb/d, meaning Apr oil production was up 246,000 b/d MoM from Mar. Unlike last month, Texas contributed a solid portion of the MoM growth, being +107,000 b/d from March, whereas in March the overall MoM growth came almost entirely from the Gulf of Mexico. The big MoM increase in Apr means that the actuals are now in a good spot to match the revised down avg Q2 oil production forecast of 12.2 mmb/d from the EIA's recent STEO. Below is the EIA's table of Form 914 actuals.

Apr actuals in line with avg weekly estimates

Figure 17: EIA Form 914 Estimated US Crude Oil Production By Forecast Month

thousand barrels per day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2019	11,860	11,679	11,916	12,162								
2018	9,995	10,248	10,461	10,475	10,464	10,672	10,936	11,325	11,470	11,559	11,926	11,963
2017	8,840	9,083	9,140	9,085	9,168	9,074	9,230	9,244	9,495	9,703	10,103	10,040
2016	9,197	9,055	9,081	8,866	8,824	8,670	8,635	8,670	8,519	8,787	8,888	8,778
2015	9,385	9,511	9,578	9,650	9,464	9,344	9,430	9,400	9,460	9,388	9,318	9,251
2014	8,051	8,136	8,274	8,573	8,612	8,718	8,782	8,886	9,041	9,221	9,303	9,467
2013	7,025	7,144	7,208	7,355	7,316	7,268	7,483	7,531	7,784	7,699	7,873	7,899

Source: EIA

Oil – Excellent Permian/Cushing/Gulf Coast oil insights from Wood Mackenzie

We listened in on the Wood Mackenzie webcast on Thurs "*The Great North American Crude Infrastructure Buildout: Quantifying the Impacts*" [\[LINK\]](#). It was an excellent call and there were many insights into the key oil question for 2019 thru 2021 – Permian oil growth, Cushing oil, pipelines, export terminals and markets. The presentation provided good forecast info, but also detail on specific key pipelines and terminals. It was excellent. Some of the key points are: (i) Lower 48 reaches peak of 13.3 mmb/d in mid 2020's, Permian drives more than 60% of growth, minor from Eagle Ford and Bakken. (ii) 2 to 2.2 mmb/d of Permian pipe under construction, expected on line end of 2019 and early 2020. (iii) Mini second wave of Permian pipe to add 1 to 1.5 mmb/d in 2021. (iv) Fairly excess capacity, lead to significant

Excellent WoodMac Permian Gulf Coast insights

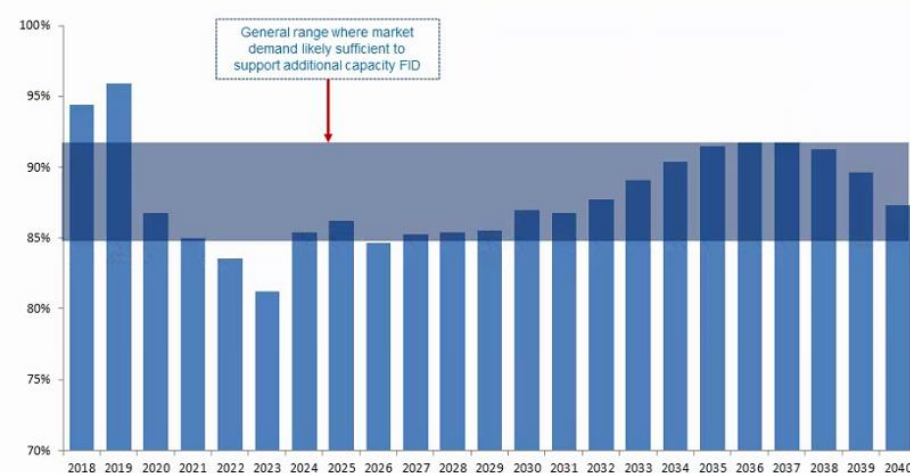
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midland price impact, see strong midland price, premium to WTI for a number of years. (v) Additional oil into Cushing (SCOOP/STACK, Rockies, Bakken) are going to demand more flow into gulf coast. (vi) Expect another 1 mmb/d flow into Cushing vs 2018 levels. (vii) US crude oil exports to exceed 5 mmb/d by early 2020s to a combination of Europe and Asia markets. (viii) Asia exports will be driven by VLCC loaded traffic, vs Europe market driven by Suez/Aframax tankers. (ix) 8 potential direct load VLCC terminals, 5 of offshore are in permitting, see a race to finish line, think 3 of these is the right number to balance the market (ie ties to VLCCs are for Asia), 4 or more is overbuilt, real possibility of overbuild. (x) Asian markets, see 2 to 2.5 mmb/d once reach plateau for US oil exports, this is what determine VLCC loading terminal needs. (xi) Corpus Christi to emerge as largest by volume oil export area, will have interconnectivity/advantaged economics vs Houston ship channel, Houston volumes will shift to Corpus as enterprise and Trafigura come online. The Wood Mackenzie slide deck was excellent and we understand the replay is still available. Our Supplemental Documents package includes a list of the key insights (not our full internal notes) from the Wood Mackenzie webcast.

Figure 18: Permian To USGC Corridor Forecast Utilization (%)

Additional Permian-USGC capacity is needed – but not until late 2020s

Permian to USGC corridor forecast utilization (%)



Source: Wood Mackenzie

Oil – Trans Mountain expects construction start in early to mid Sept

Trans Mountain President Ian Anderson was on CBC Power & Politics on Thurs (starts 13 min mark [LINK](#)). He was asked if construction would start as he had said before “by” Sept”. Anderson replied the start is expected “in” early to mid Sept. We made a transcript of the key questions. “Q: as we speak today, what is happening with construction? IA “we’re not activity constructing anywhere” “we don’t yet have all the approvals in place to commence any construction activity. The national energy board will run a process that will take some number of weeks to essentially reinstate us to back to where we were last August with all the approvals necessary to get back to work.. but, we do have about 1/3 of the pipe now in yard locations between Vancouver and Edmonton so we’ll be ready to go once we’re given the

TMX expects construction in early to mid Sept

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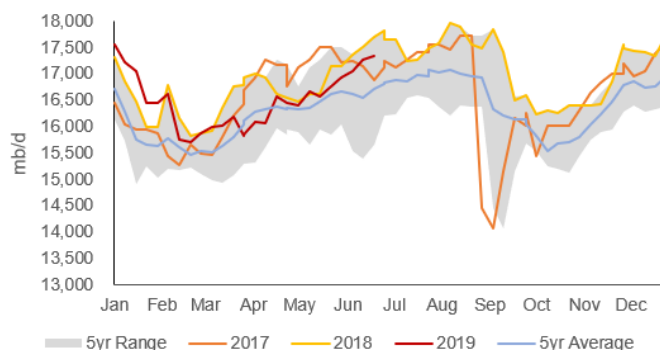
green light". Q: you have said repeatedly you expect those shovels in the ground by Sept but as you mentioned one of and the first of the outstanding issues is where you still have to get sign off, that's the National energy board, how challenging will it be to meet the 156 conditions? IA "yeah, we met all the conditions previously that enabled us to get back to work or start work last year. Some of them need to be refilled and we're in the process of putting that together and that won't be an onerous task. So the conditions themselves have largely been met already and the process we're going to go thru with the national energy board is to reaffirm that, that they have been met and have their approvals brought forward, have our route redetermined and re-established by the NEB and then we can get back to work. So we're anticipating that process is going to take a number of weeks and as you said, we're ready and expecting to be back to work in early to mid sept. and again, the process is going to be what's going to be and we'll be ready for whatever comes from it. but we're not anticipating anything surprising to come out of it".

Oil – Oil input into refineries up 73,000 b/d to 17.337 mmb/d

Crude oil inputs to refineries were up again this week, with a 73,000 b/d increase to 17.264 mmb/d for the June 21 week. This compares to last week, when crude oil inputs were up 200,000 b/d. Higher crude inputs pushed refinery utilization up 0.3% this week to 94.2%, but still down 3.3% YoY. Crude inputs and refinery utilization are still lower YoY due to recent Midwest weather events and the heavy maintenance season in preparation for IMO 2020. However, crude inputs have been ramping up in recent weeks and should continue to do so in the near term as US refinery activity always peaks in late Q3. Below is our graph of the EIA weekly crude oil input to refineries.

Oil input into refineries up 73,000 b/d

Figure 19: US Refinery Crude Oil Inputs (thousand b/d)



Source: EIA, SAF

Oil – US "NET" oil imports down 1.160 mmb/d to 2.886 mmb/d

US "NET" imports were down big this week, with a 1.160 mmb/d decrease to 2.886 mmb/d. US imports were down 812,000 b/d to 6.656 mmb/d. US exports were up 348,000 b/d to 3.770 mmb/d. (i) Canada was down 469,000 b/d this week to 3.219 mmb/d, which is in line with PADD II imports being down 606,000 b/d as Canada is basically all of this market. (ii) Saudi Arabia was up 128,000 b/d to 565,000 b/d. (iii) Columbia was +180,000 b/d to 372,000 b/d, but still down significantly from 738,000 b/d for the May 31 week. (iv) Iraq was down 98,000 b/d to 247,000 b/d for the June 21 week, which is line with tanker tracker reports of lower MoM exports so far in June. (v) Venezuela remained at zero this week due to US sanctions. (vi) Mexico was -94,000 b/d to 462,000 b/d. Below is our table of the US oil imports by major country.

US NET oil imports down 1.160 mmb/d

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Figure 20: US Weekly Preliminary Oil Imports By Major Countries

	Apr 12/19	Apr 19/19	Apr 26/19	May 3/19	May 10/19	May 17/19	May 24/19	May 31/19	June 7/19	June 14/19	June 21/19	WoW
Canada	3,396	3,669	3,600	3,481	3,484	3,688	3,186	3,866	3,683	3,688	3,219	-469
Saudi Arabia	423	807	514	311	534	571	344	408	425	437	565	128
Venezuela	71	191	186	0	0	49	0	0	0	0	0	0
Mexico	706	311	345	969	567	483	617	510	874	556	462	-94
Colombia	248	485	589	229	419	297	285	738	431	192	372	180
Iraq	5	305	551	170	521	211	309	575	441	345	247	-98
Ecuador	49	87	124	161	160	129	339	164	21	221	89	-132
Nigeria	93	67	142	446	95	191	260	366	334	333	160	-173
Kuwait	43	82	111	0	118	69	14	63	110	0	0	0
Angola	0	0	0	0	0	0	0	0	0	0	0	0
Top 10	5,034	6,004	6,162	5,767	5,898	5,688	5,354	6,690	6,319	5,772	5,114	-658
Others	958	1,145	1,252	926	1,714	1,255	1,508	1,237	1,292	1,695	1,542	-153
Total US	5,992	7,149	7,414	6,693	7,612	6,943	6,862	7,927	7,611	7,467	6,656	-811

Source: EIA, SAF

Oil – Mexico oil production is flat in 2019, with May at 1.663 mmb/d

On Mon, Pemex reported May oil production of 1.663 mmb/d, which is flat MoM, but down 10.1% YoY from 1.850 mmb/d in May 2018. The May production data is partially supportive of Pemex's forecast that oil and natural gas production is bottoming in 2019, and there will be a return to growth later in 2019. We say partially because production is flat, and not decreasing. However, production has been basically flat in 2019, so we still haven't seen proof that growth will return in H2/19. Below is our ongoing table of the monthly Pemex oil production data, and a slide from the June Pemex bank presentation. [\[LINK\]](#)

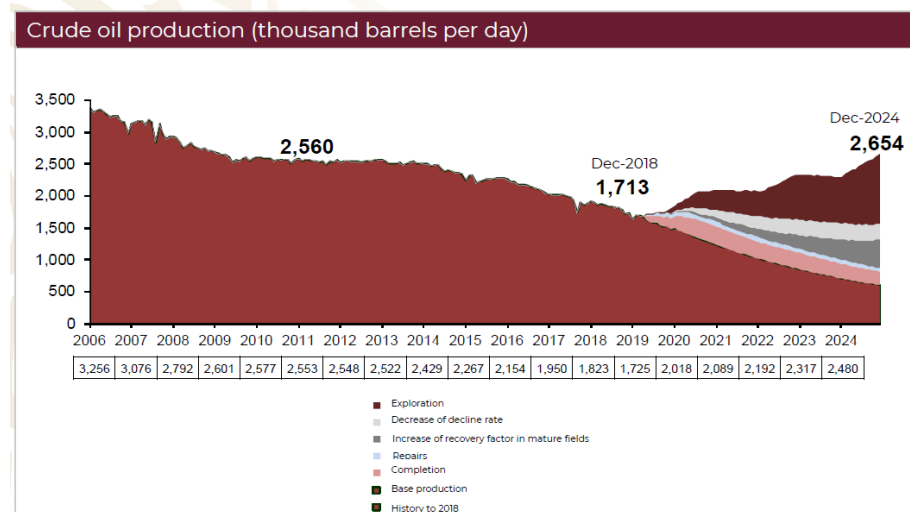
**Mexico Oil
Production
1.663 mmb/d in
May**

Figure 21: Mexico Crude Oil Production

Oil Production (thousand b/d)	2015	2016	16/15	2017	17/16	2018	18/17	2019	19/18
Jan	2,251	2,259	0.4%	2,020	-10.6%	1,909	-5.5%	1,623	-15.0%
Feb	2,332	2,214	-5.1%	2,016	-8.9%	1,876	-6.9%	1,701	-9.3%
Mar	2,319	2,217	-4.4%	2,018	-9.0%	1,846	-8.5%	1,691	-8.4%
Apr	2,201	2,177	-1.1%	2,012	-7.6%	1,868	-7.2%	1,675	-10.3%
May	2,227	2,174	-2.4%	2,020	-7.1%	1,850	-8.4%	1,663	-10.1%
June	2,247	2,178	-3.1%	2,008	-7.8%	1,828	-9.0%		
July	2,272	2,157	-5.1%	1,986	-7.9%	1,823	-8.2%		
Aug	2,255	2,144	-4.9%	1,930	-10.0%	1,798	-6.8%		
Sept	2,271	2,113	-7.0%	1,730	-18.1%	1,808	4.5%		
Oct	2,279	2,103	-7.7%	1,902	-9.6%	1,747	-8.1%		
Nov	2,277	2,072	-9.0%	1,867	-9.9%	1,697	-9.1%		
Dec	2,275	2,035	-10.5%	1,873	-8.0%	1,710	-8.7%		

Source: Pemex

Figure 22: Pemex Jun Bank Presentation – Oil Production Growth Forecast
Committed production 2019-2024



Source: Pemex

Oil – Mexico May oil exports back above 1.2 mmb/d

Mexico oil exports in May were up to 1.205 mmb/d, which is basically flat YoY, but up 17.8% MoM from 1.023 mmb/d in Apr. As noted above, Mexico production has been flat, but we don't see any major takeaways with the higher oil exports in May, as 1.205 mmb/d is right in line with average exports for the past 4 yrs. Pemex also reported that its oil exports to the US in May were 643,000 b/d, which was up MoM from 594,000 b/d in Apr 2019, but down 2.0% YoY from 656,000 b/d in May 2018. Below is our table of the Pemex oil export data.

Mexico May oil exports up to 1.205 mmb/d

Figure 23: Mexico Crude Oil Exports

Oil Exports (thousand b/d)	2015	2016	16/15	2017	17/16	2018	18/17	2019	19/18
Jan	1,261	1,119	-11.3%	1,085	-3.0%	1,107	2.0%	1,071	-3.3%
Feb	1,305	1,241	-4.9%	1,217	-1.9%	1,451	19.2%	1,475	1.7%
Mar	1,228	1,062	-13.5%	1,001	-5.7%	1,176	17.5%	1,150	-2.2%
Apr	1,035	1,081	4.4%	1,017	-5.9%	1,266	24.5%	1,023	-19.2%
May	1,114	1,204	8.1%	958	-20.4%	1,222	27.6%	1,205	-1.4%
June	1,047	1,098	4.9%	1,157	5.4%	1,110	-4.1%		
July	1,187	1,146	-3.5%	1,255	9.5%	1,156	-7.9%		
Aug	1,261	1,261	0.0%	1,114	-11.7%	1,181	6.0%		
Sept	1,169	1,425	21.9%	1,159	-18.7%	1,206	4.1%		
Oct	1,280	1,312	2.5%	1,342	2.3%	1,027	-23.5%		
Nov	1,178	1,273	8.1%	1,388	9.0%	1,135	-18.2%		
Dec	1,008	1,115	10.6%	1,401	25.7%	1,198	-14.5%		

Source: Pemex

Oil – Putin/MBS agreed to 6, possibly 9 mth OPEC+ extension

It doesn't sound like there will be much suspense at the OPEC/OPEC+ meetings on Mon and Tues. Rather the big oil news was Sat morning from Osaka. We tweeted early Sat morning [\[LINK\]](#) "Putin delivers OPEC+ deal. Post MBS meet "We will support the extension, both Russia and Saudi Arabia. As far as the length of the extension is concerned, we have yet to

Putin/MBS agree to 6, possibly 9 mth extension

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decide whether it will be six or nine months. Maybe it will be nine months". Putin met with Saudi Crown Prince MBS and, at Putin's press conference post the meeting, said *"We will support the extension, both Russia and Saudi Arabia. As far as the length of the extension is concerned, we have yet to decide whether it will be six or nine months. Maybe it will be nine months".* This means that Putin and MBS are looking at a deal to carry thru to March 31, 2020. Our Supplemental Documents package includes the Reuters reporting. [\[LINK\]](#)

Saudi's al Falih expects extension for 9 mths

Yesterday, Saudi Energy Minister al Falih was widely quoted by Reuters and others *"I think most likely a nine-month extension,"* and that he didn't think a deeper cut was needed *"I don't think the market needs that."* The key question for Saudi Arabia is will they try to enforce others like Nigeria and Iraq to stick to quota levels or will they be okay with cheating. We suspect it won't be too big an issue for the next few months as summer is the peak domestic oil demand period for Saudi Arabia, but we expect it will be an issue in Q4/19.

Other key producers have already signaled they were onside to extend

An extension looks to be a lock in light of the comments earlier this week from the other key OPEC producers – Kuwait and Iraq. (ii). Kuwait News Agency [\[LINK\]](#) reported the country's oil minister saying Kuwait will support OPEC's production cuts until the end of 2019 in hopes of improving market factors and stabilizing oil markets. (iii) Iraq's oil minister pointed to continuing or even increasing quota cuts, as Reuters [\[LINK\]](#) quoted the minister saying *"The rollover at least would be at the same level because it has not been very effective, it has been effective to a certain level to minimize the glut in the market, but there are now ideas or calls for agreeing (on) even more".*

Putin delivered this deal as he signaled he would do so on Thurs night

Putin's agreement to extend was in line with what we thought he signaled on Thurs night, when we tweeted [\[LINK\]](#) *"FT interview with Putin. On OPEC+ extension ""As for whether we will extend the agreement, you will find out in the next few days. I had a meeting on this issue with the top executives of our largest oil companies and government members right before this interview" but ..."* and [\[LINK\]](#) *"...implies Russia oil co's realize extension in their best interest "It is not about increasing production" "more attractive for investors" "dramatic price hikes or slumps will not contribute to market stability and will not encourage investment".* FT interviewed Putin ahead of the G20 and the headlines were all on Putin saying markets would know in a few days Russia's view on an extension. But anyone who read the transcript would have the same takeaway – Putin was clearly signaling that the Russian oil companies realized an extension was in their best interests. Our Supplemental Documents package includes excerpts from the FT interview. [\[LINK\]](#)

Wonder if it points to extended, but limited, impact from Druzhba problem

The chatter and reports in the run up to the June 30 term end of the OPEC+ deal was that it would be difficult to get Russia to agree to extend as they didn't want to keep production at current cut levels and just let the US keep growing and take market share. That doesn't seem to be a problem today and it makes us wonder if the continuing challenge to deal with the Druzhba contaminated oil makes it somewhat easier for Russia to accept keeping production at restricted cut levels?

Oil – Putin’s possibly 9 mths is needed, really OPEC+ deal thru 2020 is needed

One of our first thoughts on seeing Putin/MBS agree to a 6, possibly 9 month extension was that they recognize oil markets need an even longer OPEC+ deal. Its why early Sat morning, we tweeted [\[LINK\]](#) “*Putin/MBS extend OPEC+ deal possibly thru Q1/2020 is positive for oil price, but also implied acknowledgement that there is a need for OPEC+ cuts throughout 2020. IEA OMR fcast in 2020, non-OPEC supply growth +2.3 mmb/d vs demand growth +1.4 mmb/d.*” One of our biggest concerns is that oil is likely weaker in 2020. The recent June 14 IEA Oil Market Report [\[LINK\]](#) included the IEA’s first look at oil supply and demand in 2020. We highlighted the IEA’s views in our June 16 and June 23 Energy Tidbits memos [\[LINK\]](#) highlighted the IEA’s estimate above that there would be a lesser call on OPEC in 2020 of 0.9 mmb/d. Putin, MBS and other OPEC+ members must realize this and we believe that is one of the reasons why Putin has put out that the extension could possibly be 9 months. This is the key because Q1 is always the seasonally lowest oil demand period every year, and we believe Putin and MBS wanted to try to assure markets they wouldn’t bring back oil volumes for the seasonally low Q1 demand period.

OPEC+ cuts are needed through all of 2020

Oil – Bloomberg OPEC survey, Iran still at 2.280 mmb/d despite US sanctions

Bloomberg issued its survey of OPEC oil production for June this morning. (i) Overall OPEC June was down 130,000 b/d to 30.0 mmb/d. (ii) Quota cut countries are now 137,000 b/d below the quota, but its basically all due to Saudi Arabia. This also means Saudi Arabia’s effective cap on production increase is 137,000 b/d if it wants to keep overall OPEC within quota. (iii) Bloomberg had Saudi Arabia down 100,000 b/d to 9.730 mmb/d in June vs the revised May production of 9.830 mmb/d. Last month’s survey originally estimated Saudi May at 9.960 mmbd, but it was revised down by 130,000 b/d Saudi is now 581,000 b/d below its quota of 10.311 mmb/d. (iv) Iran was 100,000 b/d to 2.280 mmb/d, which is still high considering the US telling waiver countries to cut back to zero. One of the issues going into the OPEC meetings was trying to understand the levels of Iran production and exports. If Iran is sneaking out ~200,000 b/d via trucking, there must be more oil being exported to unknown destinations in addition to floating storage. (v) Iraq was +20,000 b/d to 4.750 mmb/d in June vs May of 4.730 mmb/d, but May was revised up from originally reported 4.680 mmb/d. Iraq is 238,000 b/d above its quota of 4.512 mmb/d. (vi) Nigeria was +30,000 b/d to 1.890 mmb/d, and is 205,000 b/d above its quota of 1.685 mmb/d. Note the below item that Nigeria wants to increase its quota by 161,000 b/d. (vii) Libya was flat at 1.150 mmb/d in June, but that is after a downward revision of 100,000 b/d to May. (viii) Venezuela was down 10,000 b/d 770,000 b/d in June, but that is after May was revised down by 30,000 b/d to 780,000 b/d. These are now the first months Venezuela is below 800,000 b/d.

OPEC quota cut countries 137,000 b/d below quota

Figure 24: Bloomberg Survey Of OPEC June 2019 Production

thousand b/d	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	MoM	Quota
Algeria	1,050	1,060	1,070	1,050	1,070	1,070	1,060	1,050	1,030	1,025	1,020	1,010	1,010	0	1,025
Angola	1,430	1,400	1,440	1,530	1,530	1,490	1,470	1,450	1,440	1,440	1,380	1,450	1,440	-10	1,481
Congo	330	330	330	320	320	320	320	330	330	350	350	340	350	10	315
Ecuador	520	520	530	540	520	520	510	520	530	520	520	520	530	10	508
Equatorial Guir	130	120	110	110	120	110	120	110	110	120	120	110	110	0	123
Gabon	190	180	180	170	180	180	170	210	200	190	180	200	200	0	181
Iran	3,780	3,740	3,500	3,430	3,320	3,040	2,890	2,740	2,740	2,710	2,550	2,380	2,280	-100	
Iraq	4,500	4,560	4,640	4,660	4,660	4,570	4,700	4,690	4,620	4,550	4,630	4,730	4,750	20	4,512
Kuwait	2,760	2,770	2,830	2,800	2,790	2,800	2,810	2,750	2,710	2,700	2,720	2,700	2,730	30	2,724
Libya	690	660	970	1,050	1,200	1,110	1,000	900	900	1,100	1,190	1,150	1,150	0	
Nigeria	1,620	1,720	1,760	1,800	1,800	1,760	1,770	1,790	1,830	1,870	1,900	1,860	1,890	30	1,685
Saudi Arabia	10,420	10,370	10,450	10,530	10,680	11,070	10,650	10,200	10,100	9,820	9,790	9,830	9,730	-100	10,311
UAE	2,890	2,960	3,040	3,040	3,120	3,270	3,260	3,090	3,070	3,050	3,070	3,070	3,060	-10	3,072
Venezuela	1,380	1,310	1,330	1,260	1,220	1,230	1,220	1,230	1,070	830	840	780	770	-10	
Total OPEC 14	31,690	31,700	32,180	32,290	32,530	32,540	31,950	31,060	30,680	30,275	30,260	30,130	30,000	-130	25,937

Source: Bloomberg, SAF

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Oil – Nigeria wants increase quota by 161,000 b/d to 1.86 mmb/d

There may not be the huge drama of wondering if Russia will agree to extend the cuts, but perhaps there will be some smaller drama of figuring out if the individual country quotas remain the same. As always, when all the OPEC ministers are gathered for the upcoming meetings, it is inevitable to have OPEC tidbits from the various players speaking to media. Earlier this morning, we tweeted "[@TheTerminal](#) OPEC tidbits from Vienna. *"Nigeria Will Back 9-Month OPEC Extension if Its Quota Is Raised... wants to increase its oil-output ceiling to 1.86m b/d from 1.69m b/d". Libya NOC Chairman says "Libya is pumping almost 1.3 million barrels a day". Bloomberg wrote "Nigeria wants to increase its oil-output ceiling to 1.86m b/d from 1.69m, Folasade Yemi-Esan, Nigeria's head of delegation and permanent secretary of the country's Ministry of Petroleum Resources, says in interview in Vienna. * Nigeria has consulted with OPEC about securing a higher quota and hasn't received any objections * Baseline for Nigeria's OPEC quota was not based on a "good" month". We shouldn't be surprised as Nigeria has consistently been the #1 or #2 cheater and there is some validity to the Nigeria position as it was being hit by interruptions from domestic attacks on oil infrastructure. It will be interesting to see if Nigeria can get a little higher quota..*

**Nigeria wants
161,000 b/d
higher quota**

Oil – Libya says it is producing almost 1.3 mmb/d

We continue to be impressed by Libya's ability to continue to produce oil at increasing levels in the face of the domestic fighting. The Libya National Oil Corporation has warned that it could be interrupted at any time but, until then, Libya's oil production remains strong. Another of the OPEC tidbits coming out of the OPEC members in Venezuela for tomorrow's meeting was the Bloomberg terminal story last night "Libya Pumping Almost 1.3M B/D of Crude Oil: NOC Chairman" referencing Libya NOC chairman Sanalla. The Bloomberg survey of OPEC June production estimates Libya at 1.150 mmb/d for June, but that is an average for the month.

**Libya at almost
1.3 mmb/d**

Oil – Trump doesn't acknowledge Guaido, not good for stalled regime change?

The news flow out of Venezuela on regime changes has been much less over the past month and we wonder if part of that is due to a seemingly lesser prominence of Venezuela regime change within the Trump administration. We recognize that a key change event can (and will likely) happen unexpectedly, but it seems like the regime change momentum in Venezuela has, at least for now, stalled. The seemingly lesser prominence was reinforced in Trump's G20 press conference yesterday. We tweeted [\[LINK\]](#) early Sat morning because there was one part of the Trump press conference that surprised us – his seeming to treat Guaido as a non-existent person. Trump passed on the direct opportunity to say that he still believes Guaido is the right person to lead Venezuela. He was asked the direct question and he didn't answer and didn't mention Guaido's name in what turned out to be more general comments on Venezuela. It was like he deliberately didn't mention Guaido by name or referred to him at all. It reminded me of when companies let someone go because they have a hot new face, the new guy doesn't deliver, and the company just doesn't want to talk about the new guy because he hasn't delivered as expected. Perhaps we shouldn't be surprised as Trump went all-in early on Guaido, was directly responsible for elevating the world's attention (and momentum of other countries to recognize Guaido), there was huge momentum in Q1 for regime change, but then regime change didn't happen. It's like he feels he bet on the wrong horse? It still feels like regime change but, at least for now, it feels stalled until we see some other significant event to re-establish momentum for regime change. Our Supplemental Documents package includes the transcript we made of this Trump's long answer to the question "do you still believe Juan Guaido is the right person to lead the country?".

**Trump doesn't
acknowledge
Guaido**

Oil – Trump new ask for Khomenei sanctions & ballistic missiles hurt any momentum

No one should be surprised to see Trump do something unexpected to change the momentum on Iran. After all, we think it's fair to say that it has happened, either positively or negatively, on probably all major initiatives. Following Iran shooting down the US drone almost two weeks ago, Trump was the key to de-escalating the potential for fighting. And then by narrowing the ask to no nuclear weapons, Trump created the hope for some future talks. But this week, he pushed the process back with his added sanctions on Khomenei and also his increased ask for more than no nuclear weapons i.e. ballistic missiles. Plus it raises the concerns that Iran has that they can't trust Trump in his words or that the B team is driving the Iran policy. This was also a good example of reading more than his tweet. His tweet said *"No nuclear weapons and No further sponsoring of terror"*. That maybe isn't too bad, but then in the separate prepared commentary, it's clear that the hawks, Saudis, etc got to Trump and said no nuclear weapons isn't enough. The statement says *"until the regime abandons its dangerous activities and its aspirations, including the pursuit of nuclear weapons, increased enrichment of uranium, development of ballistic missiles, engagement in and support for terrorism, fueling of foreign conflicts, and belligerent acts directed against the United States and its allies"*. No question that including Khomenei was a major negative to Iran, it was also the increased ask that has pushed the momentum for talks backwards. No surprise, Iran's response was negative including the foreign ministry tweet *"Imposing useless sanctions on Iran's Supreme Leader (Ayatollah Ali Khamenei) and the commander of Iran's diplomacy (Foreign Minister Mohammad Javad Zarif) is the permanent closure of the path of diplomacy with Trump's desperate administration. Trump's administration is destroying the established international mechanisms for maintaining world peace and security"*. It seems like the hawks are going to do their best to not let Trump get too far out over his skis on a potential Iran deal. Our Supplemental Documents package includes the White House statement.

Trump's new ask hurt any Iran momentum

Oil – Was UAE sent out to do more damage control post Khomenei sanctions?

Was it coincidental that UAE came out the day after the Khomenei sanctions and increased ask with a surprising comment that they didn't blame Iran for the recent 4 tankers attacked in UAE waters. UAE clearly said they can't blame Iran or anyone for the 4 tankers recently attacked in UAE waters. We don't profess to know the UAE concerns, but we have to believe a full on war with Iran is not what they want given their proximity and exposure to a lot of missiles. On one hand we have to wonder why, but when we think about it, if someone is going to try to de-escalate the heightened anxiety from Trump, it would have to be UAE as opposed to the Saudis right now. Maybe it was coincidental, but it just seemed like they were sent out to do damage control and at least try to de-escalate. Our Supplemental Documents package includes the Newsweek story. [\[LINK\]](#)

UAE damage control?

Oil – Libya, an increased risk for an accelerated fighting

Libya is very different than Iran, Libya has been and continues to have direct military fighting. There was so much oil and market news this weekend that the developments in Libya seemed to be overlooked. On Fri night, we tweeted [\[LINK\]](#) *"Higher risk to rapid escalation of fighting in Libya. Haftar gives orders tonight to target Turkish ships in Libyan waters and 'Turkish strategic sites, companies and projects' in Libya 'are considered legitimate targets by the armed forces'"*. We saw the Al Arabiya (Saudi Arabia news) story *"Libya's Haftar orders forces to attack Turkish ships, bans flights to Turkey"* and thought how this adds one more element of risk to the Libya situation. It may not be quite the same relative military strengths as Iran to US, but Libya's military and firepower is small relative to Turkey. And not just an added risk, but a risk that there is a rapid escalation i.e. kind of like adding accelerant to a fire. Haftar has ordered his forces to attack any Turkish ships in Libya territorial waters. Turkey

Haftar orders attack on Turkish vessels in Libya waters

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has been supportive of Tripoli and Haftar wants to stop any help in equipment or arms or anything. Our supplemental Documents package includes the Al Arabiya story.

Oil – Looks like rejected Iraqi oil was blended with Iran oil via offshore tanker to tanker

We continue to believe a big challenge for oil markets remains how much oil is Iran still being able to export despite the US sanctions. Last week's (June 23, 2019) Energy Tidbits memo noted the WSJ story "*Suspected Iranian Oil Caught in Sanctions Trap. With U.S. sanctions on Iran bearing down, Italian oil giant Eni rejected a cargo of crude that bore the hallmarks of Iranian oil*" [\[LINK\]](#). The WSJ article seemed to provide a good 3rd party confirmation of this Iran oil being (or at least trying to be) rebranded as Iraq oil. Later, Argus Media provided more details on the rejected cargo and reported the refinery operator Eni saying they refused the crude delivery because its "*chemical-physical specifications are different from those established contractually to an extent that makes them incompatible*" [\[LINK\]](#). If they inspected the crude at loading, how did the normal Basrah blend crude end up as being crude upon delivery that didn't fit Basrah blend specs? Argus story said "*Tracking data from analytics firm Vortexa indicate the White Moon may have taken on its cargo through a ship-to-ship transfer from the very large crude carrier (VLCC) New Prosperity in waters outside of Iraq's Basrah Oil Terminal (BOT). The New Prosperity, in turn, received its cargo from the Abyss, whose initial loading point is not clear. The Abyss previously carried shipments of Iranian crude and fuel oil prior to the expiry of Iran sanctions waivers in early May.*" Iraq's state-owned marketer Somo said that none of Iraq's crude cargos have been refused, and this cargo shipment "*has no link whatsoever to Iraqi crude oil exports*". The reality is that the Argus reporting is the only explanation on how crude oil loaded as one quality arrives at destination with varied crude oil specs. It certainly looks like a situation of Iran oil being snuck out and rebranded as Iraq oil. Our Supplemental Documents package includes the Argus article.

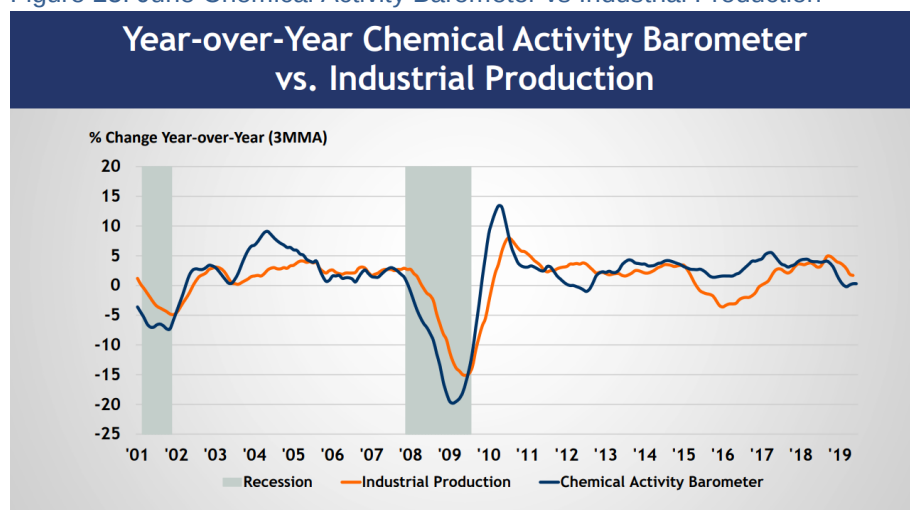
More details on rejected Iraqi oil cargo

Oil – ACC Chemical Activity Barometer shows weaker data in June

The focus on a slowing US economy was driven by the Powell comments and on a range of US economic data. One of the better looking forward indicators is the monthly American Chemistry Council's June "*Chemical Activity Barometer*" (CAB) [\[LINK\]](#). The CAB has a good track record as a leading indicator of a recession in the US economy with an average lead time of 8 months as a prior indicator, but lead time ranging from 2 to 14 months. The June CAB was flat on a three month moving average basis, but the unadjusted CAB fell 0.2% in June, and fell 0.3% in May. Additionally, the CAB reading for May was revised downwards by 0.38 points and April was revised down 0.22 points. The key takeaway here is the clear change in tone towards the negative side from the American Chemical Association, as they write "*The slowing economy and rising trade tensions have weighed on business confidence and investment, resulting in mixed manufacturing activity ... In summary, the CAB reading continues to signal gains in U.S. commercial and industrial activity through late 2019, but at a moderated pace*".

Chemical Activity Barometer weaker in June

Figure 25: June Chemical Activity Barometer vs Industrial Production



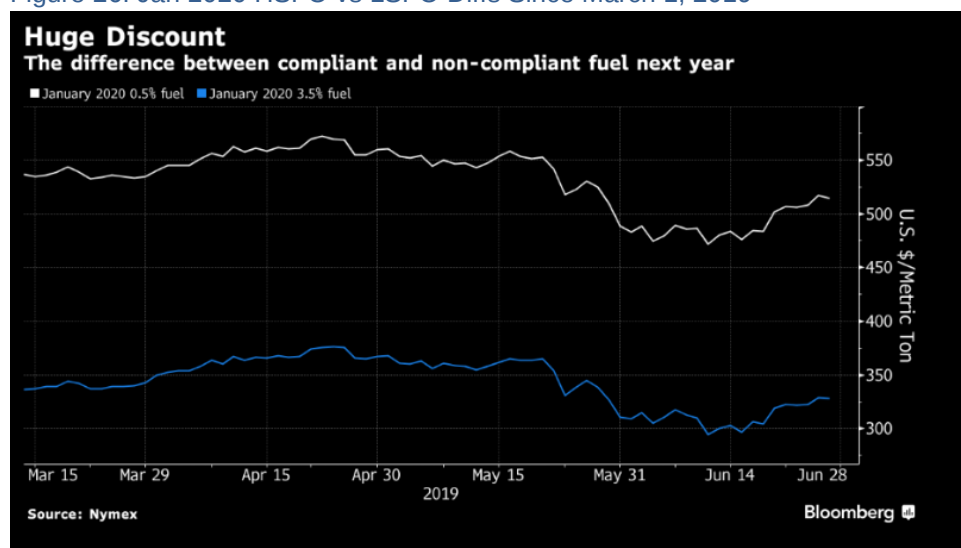
Source: American Chemistry Council

Oil – IMO 2020, BIMCO's estimate implies <20% HSFO demand retained w/ scrubbers

There was a good IMO 2020 tidbit inside a Bloomberg terminal story on Fri morning "*Shipper Group Says Oil Refiners Haven't Done Enough for IMO 2020*". The story, as evidenced by the title, was directed at how shippers are worried about the availability of IMO 2020 fuels. But there was more and why we tweeted [\[LINK\]](#) on the tidbits from BIMCO, the world's largest shipping organization. Bloomberg terminal story wrote "*The uncertainty about which fuels to use led to some concern that ships could inadvertently mix products in a way that could be risky. Less than 3% of the global fleet has currently opted to install a scrubber, BIMCO estimates, even if those ships typically tend to be larger carriers accounting for a greater share of consumption.*" Our tweet said "*@TheTerminal BIMCO (worlds largest shipping org) est <3% of global fleet has switched to scrubbers, tend to be larger carriers ie greater share of demand. Wonder if 80/20 rule applies, if so implies ~12% of HSFO will stay with scrubber. Wider diffs to stay?*" We don't know if it's a 80/20 rule, maybe its higher, but the takeaway from the math implied by the BIMCO estimate is that, assuming compliance to IMO 2020, something less than 20% of the HSFO shipping demand would be retained by ships using scrubbers. Below is the HSFO diff chart in the Bloomberg terminal story. Our Supplemental Documents package includes the Bloomberg terminal story.

Low scrubber penetration?

Figure 26: Jan 2020 HSFO vs LSFO Diffs Since March 1, 2019



Source: Bloomberg

Oil & Natural Gas – ~3.8 mmb/d of unused capacity can bypass Strait of Hormuz

Last week's (June 23, 2019) Energy Tidbits memo highlighted the new EIA brief "*The Strait of Hormuz is the world's most important oil transit chokepoint*" [\[LINK\]](#), which we recommend adding to reference libraries. Early in the week, there was the increased concern for an Iran escalation, which meant many were referencing this EIA brief. The referencing was on the 17.3 mmb/d of crude and condensate thru the Strait of Hormuz, but also that there was 6.8 mmb/d of capacity that could bypass the Strait of Hormuz. We thought that commentary was misleading, so on Tues we tweeted [\[LINK\]](#) "EIA: pipelines that can bypass Strait of Hormuz. 'Unused' capacity of 3.8 mmb/d, but effective 'incremental' 'unused' may only be 2.3 mmb/d. Abu Dhabi pipe ends at Fujairah terminal, site of original tanker attacks, and close to downed US drone." Our concern was that readers would think that an additional 6.8 mmb/d could be moved on these pipelines if the Strait of Hormuz was closed. Whereas these pipeline were already moving 3.0 mmb/d (ie. only 3.8 mmb/d of unused capacity), but that "effective" capacity may only be 2.3 mmb/d given that, in the event of a Strait of Hormuz closure, there could also be an impact on the UAE Fujairah terminal. Our Supplemental Documents package includes the EIA brief.

~3.8 mmb/d
unused capacity
to bypass Strait
of Hormuz

Figure 27: Operating Pipelines That Bypass The Strait of Hormuz (million b/d)

Pipeline name	Country	Capacity	Throughput	Unused capacity
Petrolina (East-West Pipeline)	Saudi Arabia	5.0	2.1	2.9
Abu Dhabi Crude Oil Pipeline	United Arab Emirates	1.5	0.6	0.9
Abqaiq-Yanbu Natural Gas Liquids Pipeline	Saudi Arabia	0.3	0.3	0.0
TOTAL		6.8	3.0	3.8

Source: EIA

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Oil & Natural Gas – Panama Canal not impacted by 6.2 earthquake

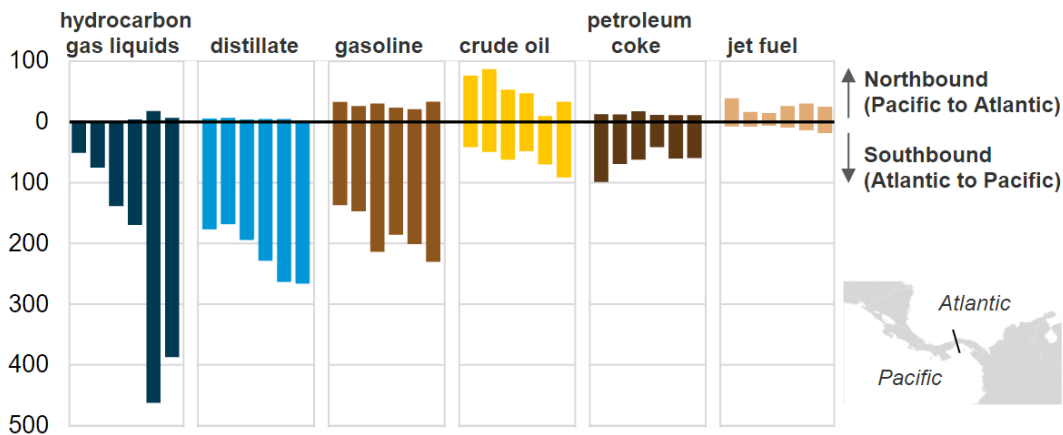
There was another big earthquake in Panama, a 6.2 and just like the last big one this year, it was right by the city David at the very west of Panama by the Costa Rica border. And fortunately far enough away to not impact the Panama Canal. Our big concern in watching the Panama Canal is that there are increasing volumes of US propanes, gasoline, condensate and other hydrocarbon liquids tankered thru the Panama Canal. Our worry isn't so much the direct volumes, but if there was any disruption to the Panama Canal supply chain that impacted these volumes, would it ultimately push back to cause disruptions in Texas shale/tight oil volumes. After all it is these Permian and Eagle Ford oil wells that produce the associated natural gas and liquids that are driving these increasing exports. Our Supplemental Documents package includes the recent EIA Panama Canal brief. [\[LINK\]](#)

No Panama Canal impact from 6.2 earthquake

Figure 28: Petroleum Flows Thru The Panama Canal (2013 – 2018)

Petroleum flows through the Panama Canal (2013-2018)

thousand barrels per day



Source: U.S. Energy Information Administration, based on Panama Canal Authority

Source: EIA

Oil & Natural Gas – Impact of China increasing US oil/products/LNG imports

The Trump/Xi meeting at the G20 is going to bring back the focus on where China will increase US imports. Trump's comments this weekend highlighted increasing China imports of agriculture products, but the one area that has been consistently highlighted as oil and LNG. This week, Bloomberg reported [\[LINK\]](#) that China imported 186,000 b/d of oil from the US in May, which is +75,000 b/d MoM from 117,000 b/d in Apr which led to our June 26, 2019 tweet [\[LINK\]](#) "China imported 186,000 b/d of US crude oil in May. Expect increased China imports of oil, petroleum products, LNG as part of any US/China trade deal". Bloomberg data also showed that China imports of Iran oil were down 529,000 b/d in May, and Venezuelan imports were down 269,000 b/d in May to 195,000 b/d. No matter what deal is done and when, the expectation will be that the one fairly certain commitment for increased China imports will be increased oil and LNG imports, especially with US Gulf coast oil/LNG export capacity ramping up thru 2019/2020. Below is a table showing the USD\$/billions per year impact of increasing China imports.

China energy imports to increase in trade deal

Figure 29 USD\$ Billions Per Year Impact of Increasing China Imports

Impact to China Trade Imbalance by Increasing Oil Imports (\$billions/year)					Impact to China Trade Imbalance by Increasing LNG Imports (\$billions/year)				
WTI Oil Price					LNG Landed Price				
		\$50	\$55	\$60			\$10	\$11	\$12
b/d	200,000	\$3.7	\$4.0	\$4.4	bcf/d	1	\$3.7	\$4.0	\$4.4
	400,000	\$7.3	\$8.0	\$8.8		2	\$7.3	\$8.0	\$8.8
	600,000	\$11.0	\$12.0	\$13.1		3	\$11.0	\$12.0	\$13.1
	800,000	\$14.6	\$16.1	\$17.5		4	\$14.6	\$16.1	\$17.5
	1,000,000	\$18.3	\$20.1	\$21.9		5	\$18.3	\$20.1	\$21.9

Source: SAF

Oil & Natural Gas – We expect to see the same in India, Japan, and South Korea

The reality is that this concept of increasing imports of US oil and LNG will play out in other Asian countries as Trump moves to other bilateral trade arrangements ie. India, Japan, and South Korea. We were reminded of this application to other countries when the India times reported [\[LINK\]](#) on comments from Mike Pompeo saying “We are working diligently to make sure that India is fully supplied with crude oil at a good price”.

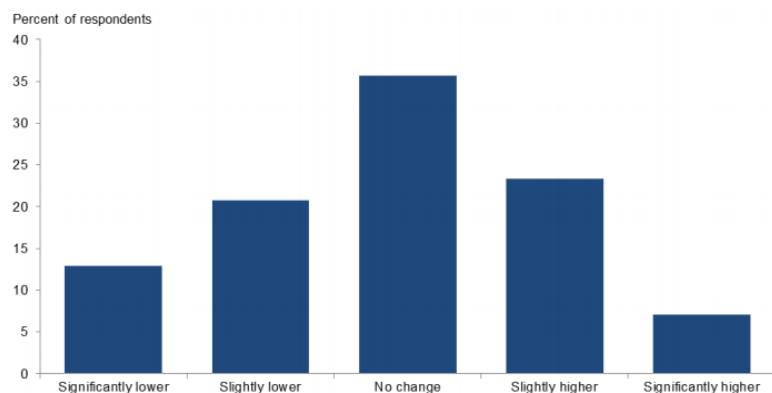
**Expect to see the
same across Asia**

Oil & Natural Gas – Dallas Fed Energy Survey “increasingly pessimistic outlook”

It may not be scientific, but a good leading indicator for US E&P activity is the Federal Reserve Bank of Dallas quarterly survey of Texas based producers and oilfield service companies. And this one is worth a read as it brings a clear negative tone from producers and service companies. The survey is titled “oil and gas activity flat amid surging uncertainty and increasingly pessimistic outlooks” and the main takeaway being declining capex leading to a slowdown in oil and gas activity. [\[LINK\]](#). The Dallas Fed writes “The company outlook index, after returning to positive territory last quarter, was once again negative for the latest three months, falling 28 points to -4.5, pointing to more pessimism about future conditions”. Not surprisingly, company outlooks were the worst among oilfield services companies, which makes sense due to the weaker drilling activity in 2019, especially in the Permian. The issue in 2019 has been stronger oil prices not leading to increases in drilling activity, subsequently resulting in lower than expected US oil production growth. A key point to keep in mind for the survey is that respondents expect WTI to be \$57.14 by yr end 2019 and HH to be \$2.67 and the risk we have been identifying is that 2020 prices are lower than those average expectations. Our May 1, 2019 SAF Energy Blog [\[LINK\]](#) “Post Q1 Earnings Season, Look For A Lowering Of YoY Growth Forecasts For US 2019 Oil Production” commented on how the low Q4/18 oil prices (and lower 2019/2020 strips) led to lower capex budgets for 2019, and despite stronger 2019 prices, capex budgets haven’t responded. The Dallas Fed further emphasized this point by asking companies, “How does your firm’s capital spending budget for 2019 compare with what it was at the start of the year”? With 70% of respondents saying their spending plan has either stayed the same or decreased. Below we have pasted in the capital spending survey graph from the Dallas Fed Energy Survey.

**Increasingly
pessimistic
outlook for Texas
oil and gas**

Figure 30: Dallas Fed: How Does Your Firm's Spending Budget Compare With Beg. of 2019?



NOTE: Executives from 154 oil and gas firms answered this question during the survey collection period, June 12–20, 2019.

Source: Dallas Federal Reserve

Oil, Natural Gas & Mining – Positive as Trump points to no sanctions on Turkey

Oil, natural gas and mining companies can't be 100% confident, but they have to a higher degree of confidence of no US sanctions on Turkey after listening to Trump yesterday. There is no doubt the Trump G20 Q&A was full of surprises and another big one was him pointing to no sanctions on Turkey related to Turkey's purchase of Russian S400 missile defense system. He didn't specifically say there wouldn't be sanctions, but its hard to take his words as meaning anything other than don't expect sanctions. Its why we tweeted [\[LINK\]](#) early Sat morning "Positive for oil, gas and mining in Turkey. Trump asked if sanctions on Turkey for S400 Russia deal? Trump 5 min answer, clearly pointing to no sanctions, "So it's a mess, it's a mess. And honestly, its not really Erdogan's fault". It was interesting that Trump took 5 min to go thru a long commentary on Turkey sanctions. We made a transcript of the last 1 min 45 of his answer and it is worth a read to see how it points to no sanction on Turkey. Not a guarantee, but certainly the takeaway after reading what he said. Our Supplemental Documents package includes the transcript we made of Trump's Turkey response.

Trump seems to suggest no Turkey sanctions

Electricity – Trump's anti wind/solar comments are positive for oil, natural gas & coal

One of the other can't miss (and lengthy) moments from the Trump G20 press conference was his comments on clean energy, in particular wind but also a tuck in of solar. Trump was clear in his comments, in particular in his dislike of subsidies for wind. Trump was asked why he thinks ignoring climate change is in the best interest of Americans. He said he wasn't ignoring, but isn't prepared to create a high standard so that he hurts US productivity by 20% to 25%. And he just doesn't see wind work without subsidies. Highlights solar isn't strong enough to power plants. And closes with "The United States is paying tremendous amounts of money on subsidies for wind, I don't like it. I don't like it. I don't want to do that". We have three takeaways from his climate change response. (i) Don't look for him to support wind/solar subsidies at federal level. (ii) Lower environmental costs for businesses to operate in the US relative to Canada. (iii) Positive for oil, natural gas and coal. Not giving subsidies to clean energy to force a straight cost on cost comparison means a longer lift potential for oil, natural gas and coal. It also ties into his actions on his whole approach to energy policy, in particular to reduce EPA standards/burdens as seen last week (see our June 23, 2019 Energy Tidbits [\[LINK\]](#)) with the EPA's new "Affordable Clean Energy rule" that was set up to

Trump's negative comments vs wind

overturn Obama's Clean Air Act. Our Supplemental Documents package includes the transcript we made of this long answer.

Climate Change – Fascinating read on the anti pipeline campaign funding

Readers know that, over the 19+ years of the memo, our objective is to try to present info (either positive or negative) that helps readers with their perspective to the energy and we don't see Energy Tidbits as being an extension of a lobby group on either side. Besides there are already many effective action groups leading the charge. The reason why we are noting this Business in Vancouver article isn't to take the anti climate change side, but rather we just found it to be a fascinating read. The BIV article is well described by the story title *"Anti-pipeline campaign was planned, intended and foreign-funded: Vivian Krause"* [\[LINK\]](#). If anyone is wondering what Kenney is talking about, this article will give the background. The part that jumped out at me was *"The funding foundations, she said, are all members of an umbrella group called the "Consultative Group on Biological Diversity," created in the late 1980s by the U.S. government, which still provides a very small amount of funding. Large scale initiatives vary from protecting bears to another which includes two-thirds of Canada, half of which they want no "extractive industries," no logging, roads, mining, hydro, oil or gas. Protecting large tracts of land, from the beginning, was about protecting the habitat of iconic species like caribue and grizzly. It was also about restricting oil and gas development in Canada, Krause said. In the U.S., the initiative only affects states that don't produce 95 per cent of America's oil".* Our Supplemental Documents package includes the BIV article.

**Anti pipeline
campaign funding**

Energy Tidbits – Now on Twitter

As you have probably noticed in today's memo, we are tweeting now for breaking news or early views on energy items, most of which are followed up in detail in the Energy Tidbits memo or in separate blogs. We have now been tweeting for over a month, our Twitter handle is @Energy_Tidbits and can be followed at [\[LINK\]](#). We wanted to use Energy Tidbits in our name since I have been writing Energy Tidbits memos for over 19 consecutive years. Please take a look thru our tweets and you can see we aren't just retweeting others tweets. Rather we are trying to use Twitter for early views on energy items. Our Supplemental Documents package includes our tweets this week.

**Energy Tidbits now
on Twitter**

Energy Tidbits – Sign up on our email distribution for tidbits and blogs

Please note that we have set up our Energy Tidbits memo on our Stream Asset Financial website alongside our blogs. The distribution for the Energy Tidbits memo will be via the same notification system used for our blogs. To ensure you receive Energy Tidbits memos, please go to our blog sign up. We will be using the blog notification list for Energy Tidbits. The blog sign up is available at [\[LINK\]](#).

**Sign up to receive
future Energy
Tidbits memos**

LinkedIn – Look for quick energy items from me on LinkedIn

I can also be reached on LinkedIn and plan to use it as another forum to pass on energy items in addition to our weekly Energy Tidbits memo and our blogs that are posted on the SAF Energy website [\[LINK\]](#).

**Look for energy
items on LinkedIn**

Misc Facts and Figures.

During our weekly review of items for Energy Tidbits, we come across a number of miscellaneous facts and figures that are more general in nature

Asian cities top the leaderboard of Mercer's 2019 cost of living city ranking

Mercer put out its 2019 cost of living city ranking [\[LINK\]](#) data this week, which measures the comparative cost of housing, transportation, food, clothing etc. No surprise, Asian cities continue to dominate leaderboard, with 8 out of the top 10 spots being Asian cities. The top 10 cities are Hong Kong, Tokyo, Singapore, Seoul, Zurich, Shanghai, Ashgabat, Beijing, New York, and Shenzhen. Below is an exhibit from the new cost of living ranking report. The top 5 US were NYC 9, San Francisco 16, LA 18, Chicago 38 and Honolulu 38. We were a little surprised to see Houston at 59, and ranked higher cost of living than Cdn cities Vancouver 112 and Toronto 115, others in the top 5 Cdn cities were Montreal 139, Calgary 153, and Ottawa 161.

Figure 31: Mercer's 2019 Cost Of Living Ranking



Source: Mercer

Millionaires support wealth tax on >\$50 millionaires

This week, CNBC ran a video clip on this story a few times "Most millionaires support a tax on wealth above \$50 million, CNBC survey says" [\[LINK\]](#). CNBC had a survey conducted with Spectrem Group that "polled 750 people with investible assets of \$1 million or more. Of the respondents, 261 were Republicans, 261 were independent and 218 were Democrats". The survey said that "Fully 60% of millionaires support Warren's plan for taxing the wealth of those who have more than \$50 million in assets." The hockey analogy we would use is that its like the 2nd power play unit sitting on the bench hoping the 1st power play unit doesn't score so they can score and catch up in their stats.